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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,015	02/08/2005	Tatsuji Enoki	1422-0662PUS1	7572

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EXAMINER
CLARK, AMY LYNN

ART UNIT	PAPER NUMBER
1655	

NOTIFICATION DATE	DELIVERY MODE
07/05/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/524,015	ENOKI ET AL.	
	Examiner	Art Unit	
	Amy L. Clark	1655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 April 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *11,13,14 and 16-21* is/are pending in the application.

4a) Of the above claim(s) *18-21* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *11,13,14,16 and 17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *02/21/2007; 05/16/2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Acknowledgment is made of the receipt and entry of the amendment filed on 16 April 2007 with the amendment of claims 11, 13, 14, 16 and 17, the cancellation of Claims 12 and 15, and newly added Claims 18-21.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Election/Restrictions

Claims 11,13, 14 and 16-21 are currently pending.

Newly submitted claims 18-21 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: The originally examined invention was drawn to a therapeutic agents or prophylactic agent, an insulin-mimetic action agent, food, beverage, or feed, an agent for enhancement of glucose uptake into a cell, and an agent for induction of an adipocyte differentiation for treating or preventing a disease characterized by an abnormal response to insulin or abnormal insulin levels, wherein the agent, which comprises an extract of a plant selected from the group consisting of *Angelica keiskei* koidz., *Apium* and *Cryptotaenia japonica* Haask. as an effective ingredient. The newly added claims are drawn to methods of treating or preventing a disease. Since the originally examined claims were drawn to a composition and not a method, these newly added method claims are not examined for the reasons provided below.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 18-21 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

This application contains claims 18-21 drawn to a non-elected invention. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Claims 11, 13, 14, 16 and 17 are currently under examination.

Information Disclosure Statement

The information disclosure statements (IDS) were submitted on 21 February 2007 and 16 May 2007. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Please note that Applicant did not provide a translation of any part of reference BA (JP 2001-252044 A) and BB (JP 2-215354 A), Applicant did not provide reference BA (CN 1129908 A), and Applicant only provided an Abstract for reference CA (Park et al.). Therefore, in the case where Applicant did not provide an English translation or the reference, the references have a strikethrough. Where Applicant only supplied an abstract, the Examiner has noted this on the IDS with the words, "Abstract only".

Response to Arguments

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: "An (agent, food, beverage or feed) comprising (specific type of extract of specific plant) for treating (specific disease)".

This rejection is maintained for reasons of record and for the reasons set forth above.

Claim Rejections - 35 USC § 112

Claims 11, 13, 14, 16 and 17 remain rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

This rejection is maintained for reasons of record set forth in the paper mailed on 14 December 2006 and repeated below, slightly altered to take into consideration Applicant's amendment filed on 16 April 2007.

Applicant's arguments have been thoroughly considered, but the rejection remains the same for the reasons set forth in the previous Office action and for the reasons set forth below.

Enablement is considered in view of the *Wands* factors (MPEP 2164.O1(A)).

These include: nature of the invention, breadth of the claims, guidance of the specification, the existence of working examples, state of the art predictability of the art and the amount of experimentation necessary. All of the Wands factors have been considered with regard to the instant claims, with the most relevant factors discussed below.

Nature of the Invention: The claims are drawn to a therapeutic agent or prophylactic agent, which comprises an extract of *Angelica keiskei* koidz as an effective ingredient, wherein said extract is a solvent extract obtained with a solvent selected form the group consisting of water, chloroform, ethanol, methanol, ethyl acetate and mixtures thereof, an insulin mimetic agent, wherein the agent comprises an extract of *Angelica keiskei* koidz as an effective ingredient, wherein said extract is a solvent extract obtained with a solvent selected form the group consisting of water, chloroform, ethanol, methanol, ethyl acetate and mixtures thereof, a food, beverage, or feed, wherein the food, beverage or feed comprises an extract of *Angelica keiskei* koidz. as an effective ingredient, wherein said extract is a solvent extract obtained with a solvent selected form the group consisting of water, chloroform, ethanol, methanol, ethyl acetate and mixtures thereof, an agent for the enhancement of glucose uptake into a cell, comprising an extract of *Angelica keiskei* koidz. as an effective ingredient, wherein said extract is a solvent extract obtained with a solvent selected form the group consisting of water, chloroform, ethanol, methanol, ethyl acetate and mixtures thereof, and an agent for the induction of adipocyte, differentiation comprising an *Angelica keiskei* koidz. as an effective ingredient, wherein said extract is a solvent extract

obtained with a solvent selected form the group consisting of water, chloroform, ethanol, methanol, ethyl acetate and mixtures thereof.

Breadth of the Claims: The claims are broad in that a therapeutically effective amount of an agent, a food, beverage or feed comprising any amount of any extract of *Angelica keiskei* koidz. may be administered to treat or prevent any disease characterized by an abnormal response to insulin or abnormal insulin levels, or a disease characterized by an abnormal response to insulin or abnormal insulin levels, wherein the disease is selected from the group consisting of diabetes, obesity, arterial sclerosis, cocaine withdrawal symptoms, static cardiac incompetence, cardiovascular seizure, cerebral angiospasm, chromaffinomosa, ganlioneuroblastoma, Huntington's disease, Alzheimer's disease, hyperlipemia and hyperinsulinemia, and that an agent comprising any amount of an extract of *Angelica keiskei* koidz., enhancement of glucose uptake into a cell, and induction of adipocyte differentiation comprising an extract of *Angelica keiskei* koidz. as an effective ingredient in a patient. The complex nature of the subject matter of this invention is greatly exacerbated by the breadth of the claims.

Guidance of the Specification and Existence of Working Examples: The specification describes an extract of *Angelica keiskei* koidz root and leaf of *Angelica keiskei* koidz and an *in vitro* method of induction of adipocyte differentiation by different extracts from *Angelica keiskei* koidz, *in vitro* method of enhancing action for glucose uptake of extract from *Angelica keiskei* koidz (See Examples1-7, 14-18), a method of inhibition of enhancing action for glucose extract from root of *Angelica keiskei* by

cytochalasin B, a method of inhibition of enhancing action of glucose and insulin uptake by ethanol extract from *Angelica keiskei*, a method of enhancing glucose uptake by insulin stimulation into adipocyte induced to be different by extract fraction from root portions or yellow sap of *Angelica keiskei* (See Examples 19-25), and a method of measuring the effect of ethanol extraction of root or yellow sap of *Angelica keiskei* using type II diabetes model mouse on blood glucose (See Example 26).

The specification envisions that a therapeutically effective amount of an agent, or any type of food, beverage or feed comprising any amount of an extract of *Angelica keiskei* koidz. will have utility in humans in treating or preventing any disease characterized by an abnormal response to insulin or abnormal insulin levels, that a therapeutically effective amount of an agent, or any type of food, beverage or feed comprising any amount of an extract of *Angelica keiskei* koidz. will have utility in humans in treating or preventing any disease characterized by an abnormal response to insulin or abnormal insulin levels, wherein the disease is selected from the group consisting of diabetes, obesity, arterial sclerosis, cocaine withdrawal symptoms, static cardiac incompetence, cardiovascular seizure, cerebral angiospasm, chromaffinomosa, ganlioneuroblastoma, Huntington's disease, Alzheimer's disease, hyperlipemia and hyperinsulinemia, that an agent comprising any amount of an extract of *Angelica keiskei* koidz will have utility in humans in will have utility in humans in enhancing glucose uptake into a cell, and comprising any amount of any extract of *Angelica keiskei* koidz. will have utility in humans in induction of adipocyte differentiation.

However, no working examples are provided with regard to any therapeutic or prophylactic agent, or any type of food, beverage or feed comprising any amount of an extract of *Angelica keiskei* koidz. for treating or preventing any disease characterized by an abnormal response to insulin or abnormal insulin levels, or a disease characterized by an abnormal response to insulin or abnormal insulin levels, wherein the disease is selected from the group consisting of diabetes, obesity, arterial sclerosis, cocaine withdrawal symptoms, static cardiac incompetence, cardiovascular seizure, cerebral angiospasm, chromaffinomosa, ganlioneuroblastoma, Huntington's disease, Alzheimer's disease, hyperlipemia and hyperinsulinemia, and will have utility in humans in enhancing glucose uptake into a cell, and induction of adipocyte differentiation. Furthermore, no working examples are provided that demonstrate the efficacy of any therapeutic or prophylactic agent, or any type of food, beverage or feed comprising any amount of an extract of *Angelica keiskei* koidz. for treating or preventing any disease characterized by an abnormal response to insulin or abnormal insulin levels, or a disease characterized by an abnormal response to insulin or abnormal insulin levels, wherein the disease is selected from the group consisting of diabetes, obesity, arterial sclerosis, cocaine withdrawal symptoms, static cardiac incompetence, cardiovascular seizure, cerebral angiospasm, chromaffinomosa, ganlioneuroblastoma, Huntington's disease, Alzheimer's disease, hyperlipemia and hyperinsulinemia, and will have utility in humans in enhancing glucose uptake into a cell, and induction of adipocyte differentiation.

Predictability and State of the Art: The state of the art at the time the invention was made was unpredictable and underdeveloped. For example, Nagamitsu (inadvertently referred to as Shimura in the previous Office Action) (Reference N*, Japanese Patent Number 10-295325 A) teaches a health food obtained by extracting *Angelica keiskei* koidz. for treating various kinds of illnesses, such as blood-flow failure, cerebral apoplexy, hypertension, hangover, and diabetes mellitus, however, no working examples are provided. Furthermore, Neutel (U, 'Hypertension and its management: a problem in need of new treatment strategies'. J. Renin. Angiotension. Aldosterone Syst. Vol. 1, No. Suppl. 2 (Dec 2000), pp 10-13) teaches that it is thus becoming clear that the disappointing reduction in the incidence of coronary artery disease in treated hypertensives is a result both of inadequate BP control and the fact that we are not treating hypertension as a multifactorial syndrome. Please note that hypertension is a disease characterized by an abnormal response to insulin and at the time the invention was made, was difficult to treat. Finally, Feigin et al. (V, 'Recent advances in Huntington's disease: implications for experimental therapeutics'. Curr Opin Neurol, Vol. 15, No, 4 (August 2002), pp 483-489) teaches that the exact mechanisms underlying neuronal death in Huntington's disease remain unknown and that over the past 10 years, the leading models of neurodegeneration in the disease have involved mitochondrial dysfunction and subsequent excitotoxic injury, oxidative stress, and apoptosis. Feigin further teaches that recent advances in the understanding of the molecular biology and pathophysiology of Huntington's disease have suggested new therapeutic strategies aimed at slowing progression or forestalling onset of this

neurodegenerative disease, in preparation for future clinical trials, clinical studies have begun to provide more quantitative measures of disease onset and progression, and that this progress in both the basic science and clinical realms raises real hope for effective therapies in the near future (See Abstract). Please note that Huntington's disease has no known treatment.

Thus, while the claim-designated method may be useful for providing such an effect, Applicant does not disclose an extract of *Angelica keiskei* koidz. as an effective ingredient in treating or preventing all diseases characterized by an abnormal response to insulin or abnormal insulin levels, such as diabetes, arterial sclerosis, cocaine withdrawal symptoms, static cardiac incompetence, cardiovascular seizure, cerebral angiospasm, chromaffinomosa, ganglioneuroblastoma, Huntington's disease, hyperlipemia, and hyperinsulinemia. The Office further notes that while the specification discloses that the claim-designated methods and claim designated compositions will have utility in humans in treating such as obesity, diabetes, arterial sclerosis, cocaine withdrawal symptoms, static cardiac incompetence, cardiovascular seizure, cerebral angiospasm, chromaffinomosa, ganglioneuroblastoma, Huntington's disease, hyperlipemia, and hyperinsulinemia, nowhere in the specification or in the limitations does Applicant direct the claimed subject matter to the administration of an agent or any type of food, beverage or feed comprising an extract of *Angelica keiskei* koidz. as an effective ingredient to any subject.

It should be noted that at the time of filing of the present application, the art of medicine did not recognize the administration of an agent or a food, beverage or feed

comprising an extract of *Angelica keiskei* koidz. as an effective ingredient, wherein said agent or food, beverage or feed comprising an extract of *Angelica keiskei* koidz. as an effective ingredient for treating or preventing diseases characterized by an abnormal response to insulin or abnormal insulin levels, such as obesity, diabetes, arterial sclerosis, cocaine withdrawal symptoms, static cardiac incompetence, cardiovascular seizure, cerebral angiospasm, chromaffinomosa, ganglioneuroblastoma, Huntington's disease, hyperlipemia, and hyperinsulinemia in humans.

Amount of Experimentation Necessary: The quantity of experimentation necessary to carry out the claimed invention is high, as the skilled artisan could not rely on the prior art or instant specification to teach how to make and use an agent or a food, beverage or feed comprising an extract of *Angelica keiskei* koidz. as an effective ingredient in treating or preventing all diseases characterized by an abnormal response to insulin or abnormal insulin levels, such as obesity, diabetes, arterial sclerosis, cocaine withdrawal symptoms, static cardiac incompetence, cardiovascular seizure, cerebral angiospasm, chromaffinomosa, ganglioneuroblastoma, Huntington's disease, hyperlipemia, and hyperinsulinemia in humans. In order to carry out the claimed invention, one of ordinary skill in the art would have to identify an agent or a food, beverage or feed comprising an extract of *Angelica keiskei* koidz. that can be administered in a therapeutically effective dose with an acceptable level of side-effects.

In view of the breadth of the claims and the lack of guidance provided by the specification as well as the unpredictability of the art, the skilled artisan would have required an undue amount of experimentation to make and/or use the claimed

invention. Therefore, Claims 11, 13, 14, 16 and 17 are not considered to be fully enabled by the instant specification.

Applicant argues that the Examiner questioned what type of extract is involved and that the Examiner questioned whether it is an aqueous extract mixture or an organic extract mixture from each of these plant species, or whether it is a specific compound obtained from each of those plant species.

However, this is not found persuasive for the reasons set forth above and for the reasons provided in the previous Office Action. This rejection is maintained for reasons of record.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 11, 13, 14, 16 and 17 remain rejected under 35 U.S.C. 102(b) as being anticipated by Nagamitsu (inadvertantly referred to in the previous Office action as Shimura) (N*, Japanese Patent Number 10-295325 A).

This rejection is maintained for reasons of record set forth in the paper mailed on 14 December 2006 and repeated below, slightly altered to take into consideration Applicant's amendment filed on 16 April 2007.

Applicant's arguments have been thoroughly considered, but the rejection remains the same for the reasons set forth in the previous Office action and for the reasons set forth below.

Nagamitsu teaches a health improver for treating hypertension and diabetes mellitus (See paragraph 0007), which both read on a disease characterized by an abnormal insulin response or abnormal insulin levels, that has a SOD operation obtained from *Angelica keiskei*, the various functions nature matter (SOD) is extracted and it carries out to the health food containing this, and a health drink, i.e., health food (See paragraph 0001). Nagamitsu further teaches that the Angelica keiskei may be obtained by extraction with ethanol and methanol (See paragraph 0009). Nagamitsu further teaches a specific example wherein an alcoholic extract of *Angelica keiskei*, which is obtained by mixing *Angelica keiskei* with an ethanol and sugar solution (See Example 1).

Therefore, the reference anticipates the claimed subject matter.

Applicant argues that Nagamitsu discloses an extraction from Angelica keiskei, wherein a solution is prepared by mixing and stirring 2 kilograms of sugar in 2 liters of ethyl alcohol (See Example 3). Applicant further argues that the sugar solution does not meet the claim limitations of "a solvent extract obtained with a solvent selected from the group consisting of water, chloroform, ethanol, methanol, ethyl acetate and mixtures thereof" since the present claims do not contemplate using sugar in their extraction step.

This is not found persuasive for the reasons set forth in the previous Office Action and the reasons set forth above. Furthermore, "a solvent extract obtained with a solvent" does read on an extract obtained involving a solvent and sugar, particularly since Nagamitus defines an extract obtained by mixing *Angelica keiskei* with an ethanol

and sugar solution as an alcoholic extract (See Example 1). Therefore, the rejection is maintained for reasons of record.

Applicant's arguments, see "Applicant Arguments/Remarks Made in an Amendment", filed 16 April 2007, with respect to the rejection of Claims 11-17 under 35 U.S.C. 102(b) as being anticipated by Kawashimi (O*, Japanese Patent Number 08-154595 A) have been fully considered and are persuasive. The rejection of Claims 11-17 under 35 U.S.C. 102(b) as being anticipated by Kawashimi (O*, Japanese Patent Number 08-154595 A) has been withdrawn.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy L. Clark whose telephone number is (571) 272-1310. The examiner can normally be reached on 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terry McKelvey can be reached on (571) 272-0775. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Amy L. Clark
AU 1655

Amy L. Clark
June 23, 2007

Michele C. Flood

MICHELE FLOOD
PRIMARY EXAMINER